



a world class African city

SUPPLY, INSTALL, REPAIRS AND MAINTENANCE OF AIR-CONDITIONERS LABOUR CONTRACT

5.3. BILL OF QUANTITY

AIR-CONDITIONERS SERVICES B.O.Q (Including labour rates)

| Item | Description | Unit of measure | Rates (VAT Exc.) | Rates (VAT Inclusive) | Total |
|------|-------------------------|-----------------|------------------|-----------------------|-------|
| 1. | Minor Services per unit | EA | | | |
| 2. | Major Services per unit | EA | | | |
| 3 | Travel above 60km | KM | | | |

| <u>Material plus mark – up for work not specified on the B.O.Q items</u> | | | | | |
|--|--|-----------------|----------|-------|-----------------------|
| Item | Description | Unit of Measure | Quantity | Rates | Total (VAT Inclusive) |
| 1. | Material plus mark – up) (less R30 000,00) | % | 100 | | |
| 2. | Material plus mark - up (R30 001,00 – R20 000,00) | % | 100 | | |

| | | | | | |
|----|---|---|-----|--|--|
| 3. | Material plus mark – up (R200 001,00 and above) | % | 100 | | |
| 4. | Air-conditioner above 120 000 BTU (Material plus mark | % | 20 | | |

AIR-CONDITIONERS B.O.Q

Repairs & maintenance of Air-conditioners including labour

| Item | Description | Unit of measure | Estimated quantities | Type | Brand | BTU's | Rate | BTU's | Rate | BTU's | Rate | BTU | Rate |
|------|---------------------|--------------------|-------------------------|------------|--------------------------------------|------------------|-------------------|--------------------|------|--------------------|------|---------------------|------|
| | Outdoor unit | | | | | | | | | | | | |
| 1. | Compressor | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 2. | Fan Motor | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 3. | Condenser coils | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 4. | Capacitor | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 5. | Relay | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 6. | Thermostat | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| | | | | | | | | | | | | | |
| | Indoor unit | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 1. | Evaporator coils | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 2. | Blower motor | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 3. | Drain pump | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 4. | Air-filter | EA | 50 | Wall split | LG/ Daikin/ Midea | 9000 – | 18 000– | 36 000 – | | 60 000 – | | 96 000 – | |

| | | | | | | | | | | |
|----|-------------------------|----|----|-----------------|--------------------------------------|------------------|-------------------|--------------------|--------------------|---------------------|
| | | | | Samsung/Toshiba | 12 000 | 24 000 | 48 000 | 72 000 | 120 000 | |
| 5. | Thermostat | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| 6. | Control board | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| 7 | Sensors | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| | Refrigeration System | | | | | | | | | |
| 1. | Refrigerant leaks | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| 2. | Expansion valve | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| 3. | Capillary tubes | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| 4. | Refrigerant charging | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| | | | | | | | | | | |
| | Electrical | | | | | | | | | |
| 1. | Wiring & connections | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| 2. | Circuit breakers | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| 3. | Fuses | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| 4. | Transformers | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| 5. | Electrical contacts | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| 6 | Humidistat | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| 7. | Grills and diffusers | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |
| 8. | Ductwork and insulation | M | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 |

| | | | | | | | | | | | |
|-----|-------------------------|----|----|------------|-----------------------------------|---------------|----------------|-----------------|-----------------|------------------|--|
| 9. | Air-handling unit | EA | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 | |
| 10. | Wiring cabling | M | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 | |
| 11. | Copper pipes & fittings | M | 50 | Wall split | LG/ Daikin/ Midea Sumsung/Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 | |

AIR-CONDITIONERS B.O.Q

Repairs & maintenance of Air-conditioners including labour

| Item | Description | Unit of measure | Estimated quantities | Type | Brand | BTU's | Rate | BTU's | Rate | BTU's | Rate | BTU | Rate |
|------|---------------------|-----------------|----------------------|----------|------------------------------------|---------------|----------------|-----------------|-----------------|------------------|------|-----|------|
| | Outdoor unit | | | | | | | | | | | | |
| 1. | Compressor | EA | 50 | Cassette | LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 | | | |
| 2. | Fan Motor | EA | 50 | Cassette | LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 | | | |
| 3. | Condenser coils | EA | 50 | Cassette | LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 | | | |
| 4. | Capacitator | EA | 50 | Cassette | LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 | | | |
| 5. | Relay | EA | 50 | Cassette | LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 | | | |
| 6. | Thermostat | EA | 50 | Cassette | LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 | | | |
| | Indoor unit | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| 1. | Evaporator coils | EA | 50 | Cassette | LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 | | | |
| 2. | Blower motor | EA | 50 | Cassette | LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 | | | |
| 3. | Drain pump | EA | 50 | Cassette | LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | 18 000– 24 000 | 36 000 – 48 000 | 60 000 – 72 000 | 96 000 – 120 000 | | | |
| 4. | Air-filter | EA | 50 | Cassette | LG/ Daikin/ Midea | 9000 – | 18 000– | 36 000 – | 60 000 – | 96 000 – | | | |

| | | | | | | | | | | | | | | |
|----|----------------------|----|----|---|-------------------|--|--------------------|--|--------------------|--|---------------------|--|---------------------|---------------------|
| | | | | Samsung/ Toshiba | 12 000 | | 24 000 | | 48 000 | | 72 000 | | 120 000 | |
| 5. | Thermostat | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 6. | Control board | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 7 | Sensors | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| | Refrigeration System | | | | | | | | | | | | | |
| 1. | Refrigerant leaks | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 2. | Expansion valve | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 3. | Capillary tubes | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| 4. | Refrigerant charging | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 9000 – 12 000 | | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | |
| | | | | | | | | | | | | | | |
| | Electrical | | | | | | | | | | | | | |
| 1. | Wiring & connections | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | | 18 000– 24 000 | 96 000 – 120 000 |
| 2. | Circuit breakers | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | | 18 000– 24 000 | 96 000 – 120 000 |
| 3. | Fuses | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | | 18 000– 24 000 | 96 000 – 120 000 |
| 4. | Transformers | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | | 18 000– 24 000 | 96 000 – 120 000 |
| 5. | Electrical contacts | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | | 18 000– 24 000 | 96 000 – 120 000 |
| 6 | Humidistat | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | | 18 000– 24 000 | 96 000 – 120 000 |
| 7. | Grills and diffusers | EA | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | | 18 000– 24 000 | 96 000 – 120 000 |
| 8. | Ductwork and | M | 50 | Cassette LG/ Daikin/ Midea Sumsung/ Toshiba | 18 000– 24 000 | | 36 000 – 48 000 | | 60 000 – 72 000 | | 96 000 – 120 000 | | 18 000– 24 000 | 96 000 – 120 000 |

AIR-CONDITIONERS B.O.Q

(Supply, deliver & install of Air-conditioners including commissioning)

| Item | Description | Unit of measure | Estimated quantities | Type | Brand | SABS Approved | Air-conditioner Rate | Labour rate per hour | TOTAL (VAT INCLUSIVE) |
|------|-----------------------------|-----------------|----------------------|----------|-------|---------------|----------------------|----------------------|-----------------------|
| 1. | 9 000 BTU Air-conditioner | EA | | Cassette | | | | | |
| 2. | 12 000 BTU Air-conditioner | EA | | Cassette | | | | | |
| 3. | 18 000 BTU Air-conditioner | EA | | Cassette | | | | | |
| 4. | 24000 BTU Air-conditioner | EA | | Cassette | | | | | |
| 5. | 48 000 BTU Air-conditioner | EA | | Cassette | | | | | |
| 6. | 60 000 BTU Air-conditioner | EA | | Cassette | | | | | |
| 7. | 72 000 BTU Air-conditioner | EA | | Cassette | | | | | |
| 8. | 80 000 BTU Air-conditioner | EA | | Cassette | | | | | |
| 9. | 96 000 BTU Air-conditioner | EA | | Cassette | | | | | |
| 10. | 120 000 BTU Air-conditioner | EA | | Cassette | | | | | |

AIR-CONDITIONERS B.O.Q

(Supply, deliver & install of Air-conditioners including commissioning)

| Item | Description | Unit of measure | Estimated quantities | Type | Brand | SABS Approved | Air-conditioner Rate | Labour rate per hour | TOTAL (VAT INCLUSIVE) |
|------|-----------------------------|-----------------|----------------------|------|-------|---------------|----------------------|----------------------|-----------------------|
| 1. | 26 000 BTU Air-conditioner | EA | | VRV | | | | | |
| 2. | 48 000 BTU Air-conditioner | EA | | VRV | | | | | |
| 3. | 60 000 BTU Air-conditioner | EA | | VRV | | | | | |
| 4. | 72 000 BTU Air-conditioner | EA | | VRV | | | | | |
| 5. | 80 000 BTU Air-conditioner | EA | | VRV | | | | | |
| 6. | 96 000 BTU Air-conditioner | EA | | VRV | | | | | |
| 7. | 120 000 BTU Air-conditioner | EA | | VRV | | | | | |

| <u>Labour Rates for work not specified on the B.O.Q line items</u> | | | | | |
|--|-------------------------------------|-------------------------------|--------------------------------|---------------------------------|---------------|
| Item | Description | Normal working hours per hour | After hours/ Saturday per hour | Sunday/ Public Holiday per hour | Rate per Hour |
| 1. | Semi-skilled labour per hour | R | R | R | R |
| 2. | Technician/ Skilled labour per hour | R | R | R | R |
| 3. | Supervisor/ Team Leader | R | R | R | R |
| 4. | Safety Officer | R | R | R | R |
| 5. | Project Manager | R | R | R | R |

Tender Number: _____

Tenderer's Authorised Signatory: _____

Name in block letter _____ Signature _____

Full name of company: _____